UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/885,223	06/20/2001	David Ofelt	1014-003US01	4414

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EXAMINER
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ART UNIT	PAPER NUMBER
2141	

DATE MAILED: 04/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/885,223	OFELT ET AL.
	Examiner	Art Unit	
	Kristie Shingles	2141	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 December 2005*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-43 and 50-53* is/are pending in the application.

   4a) Of the above claim(s) *44-49* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-43 and 50-53* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Per Applicant's Request for Continued Examination:

Claims 1, 7, 12, 19, 29, 32, 34 and 50 have been amended.
Claims 44-49 have been withdrawn.
Claims 1-43 and 50-53 are pending.

Continued Examination Under 37 CFR 1.114

1.   A request for continued examination under 37 CFR 1.114, including the fee set forth in

37 CFR 1.17(e), was filed in this application after final rejection.   Since this application is

eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e)

has been timely paid, the finality of the previous Office action has been withdrawn pursuant to

37 CFR 1.114. Applicant's submission filed on 12/12/2005 has been entered.

Response to Arguments

2.   Applicant's arguments with respect to claims 1, 7, 12, 19, 29, 32, 34 and 50 have been

considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are

such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. **Claims 1-43 and 50-53,** are rejected under 35 U.S.C. 103(a) as being unpatentable over

Manchester et al (US 6,822,960) in view of *Stiles et al* (US 6,990,121).

    a. **Per claims 1, 7 and 12,** *Manchester et al* teach a method comprising:

- receiving a set of fragments from a plurality of links in one or more interface cards according to a multi-link protocol, the set of fragments collectively composing an unsequenced data packet (col.6 lines 36-65, col.7 lines 4-19, col.12 lines 43-46,);

- performing a first routing operation in accordance with routing information to send the fragments to a multi-link service card for sequencing, wherein the routing information identifies the multi-link service card as a destination for the data packets (col.3 lines 8-14, col.7 lines 4-24, col.13 lines 1-5 and 38-44, col.16 lines 12-19, col.18 lines 47-65, col.22 lines 64-65, col.31 lines 24-26; segmented data is sent to the line card where it performs segmentation and reassembly of the fragments, mapping to a destination line card is also provisioned); and

- performing a second routing operating in accordance with routing information to send the sequenced fragments as a sequenced data packet to the one or more interface cards for communication to a destination device over a computer network (col.13 lines 18-41, col.18 lines 47-65).

Although *Manchester et al* does teach mapping data to a destination card (col.13 lines 1-5 and 38-44, col.22 lines 64-65, col.31 lines 24-26), *Manchester et al* does not explicitly teach the routing information identifying the multi-link service card as a destination. However, *Stiles et al* clearly teach addressing the multi-link protocol line cards and routing information identifying the multi-link protocol line cards as destinations (col.5 lines 23-49, col.8 line 58-col.9 line 12, col.9 lines 56-65, col.10 lines 4-33, col.15 lines 1-12, col.18 lines 7-67, col.22 lines 24-44). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of *Manchester et al* and *Stiles et al* for the purpose of providing

routing information identifying the multi-link service cards as a destination; because it allows for direct communication and mapping to a particular multi-link service card for associating the port, service cards and buffers/queues.

b.   **Claims 19, 29, 32, 34 and 50** contain limitations that are substantially similar to claims 1, 7 and 12 and are therefore rejected under the same basis.

c.   **Per claim 2,** *Manchester et al* teach the method of claim 1, wherein the multi-link service card is not directly coupled to any of the links (col.5 line 58-col.6 line 32; *Stiles et al:* col.11 lines 10-31, col.24 lines 39-43).

d.   **Claims 8 and 16** are substantially similar to claim 2 and are therefore rejected under the same basis.

e.   **Per claim 3,** *Manchester et al* teach the method of claim 1, wherein the multi-link service card is integrated with one of the interface cards (col.5 line 58-col.6 line 32, col.7 lines 4-24; *Stiles et al:* col.5 line 23-col.6 line 30, col.6 line 57-col.7 line 3, col.11 lines 10-31, col.24 lines 39-43).

f.   **Claim 9** is substantially similar to claim 3 and is therefore rejected under the same basis.

g.   **Per claim 4,** *Manchester et al* teach the method of claim 1, further comprising: sending the data packets from one or more interface cards to the destination device over multiple links according to the multi-link protocol (col.12 lines 39-47, col.21 line 65-col.22 line 9; *Stiles et al:* col.5 lines 23-49, col.14 lines 14-60, col.18 lines 7-67, col.23 lines 4-9, col.23 line 59-col.24 line 5).

h.   **Claims 10 and 17** are substantially similar to claim 4 and are therefore rejected under the same basis.

i.   **Per claim 5,** *Manchester et al* teach the method of claim 4, further comprising, prior to sending the sequenced data packets to the one or more interface cards: sending the data packets to the multi-link service card for fragmentation (col.7 lines 4-10, col.18 lines 46-60).

j.   **Claim 11** is substantially similar to claim 5 and is therefore rejected under the same basis.

k.   **Per claim 6,** *Manchester et al* teach the method of claim 1, further comprising: prioritizing the sequenced data packets to provide quality of service prior to sending the sequenced data packets to the interface cards (col.12 lines 20-38, col.27 lines 54-59, col.29 line 29-col.30 line 43; *Stiles et al*: col.15 line 39-col.16 line 49, col.17 line 27-col.18 line 67, col.19 lines 12-58).

l.   **Claims 18 and 42** are substantially similar to claim 6 and are therefore rejected under the same basis.

m.   **Per claim 13,** *Manchester et al* teach the method of claim 12, wherein the data blocks are fragments, the method further comprising building a packet from the fragments in the first multi-link service card (col.7 lines 4-10, col.18 lines 46-60).

n.   **Claim 41** is substantially similar to claim 13 and is therefore rejected under the same basis.

o.   **Per claim 14,** *Manchester et al* teach the method of claim 13, further comprising fragmenting the packet in the first multi-link service card (col.7 lines 4-10, col.18 lines 46-60).

p.   **Per claim 15,** *Manchester et al* teach the method of claim 14, further comprising sending the fragmented packet to a destination device over a computer network (col.18 lines 46-65).

q.   **Claims 20-22** are substantially similar to claim 15 and are therefore rejected under the same basis.

r.   **Per claim 23,** *Stiles et al* teach the router of claim 22, wherein the routing engine includes a routing table (col.8 lines 58-63, col.9 lines 2-6, col.10 lines 22-33, col.12 lines 28-34, col.22 lines 42-43).

s.   **Claim 51** is substantially similar to claim 23 and is therefore rejected the same basis.

t.   **Per claim 24,** *Manchester et al* teach the router of claim 19, wherein the data blocks are data packets (col.7 lines 5-9; *Stiles et al:* col.5 lines 25-49).

u.   **Claims 25, 30, 31 and 33** are substantially similar to claim 24 and are therefore rejected under the same basis.

v.   **Per claim 26,** *Manchester et al* teach the router of claim 19, further comprising a plurality of interface cards (col.4 lines 44-64, col.5 line 65-col.6 line 65; *Stiles et al:* col.6 lines 57-63, col.11 line 53-col.12 line 52, col.23 lines 1-23).

w.   **Per claim 27,** *Manchester et al* teach the router of claim 19, further comprising a plurality of multi-link service cards (col.5 line 65-col.7 line 14; *Stiles et al:* col.5 lines 23-49, col.24 lines 39-43).

x.   **Claim 28** is substantially similar to claims 5 and 14 and is therefore rejected under the same basis.

y.   **Per claim 35,** *Manchester et al* teach the multi-link service card of claim 34, further comprising: a memory logic unit coupled to the input logic unit and the output logic unit for storing at least part of the data blocks during sequencing (col.28 lines 5-45, col.29 lines 29-56).

z.   **Per claim 36,** *Manchester et al* teach the multi-link service card of claim 34, wherein the output unit fragments sequenced data blocks (col.18 lines 46-65col.23 lines 20-31, col.27 line 60-col.28 line 21).

aa.   **Per claim 37,** *Stiles et al* teach the multi-link service card of claim 34, wherein the input logic unit includes an input buffer, an unprocessed buffer and a parser (col.7 lines 7-39, col.7 line 56-col.9 line 55, col.10 lines 14-46; *Manchester et al*: col.14 line 67-col.15 line 18, col.31 line 63-col.32 line 26, col.33 lines 6-10).

bb.   **Per claim 38,** *Stiles et al* teach the multi-link service card of claim 34, wherein the output logic unit includes an output buffer, a processed buffer and a fragmenter-assembler module (col.7 lines 28-39, col.23 line 1-col.24 line 5; *Manchester et al*: col.14 line 67-col.15 line 18, col.18 lines 47-65, col.21 lines 5-8, col.24 lines 9-64, col.28 line 12-col.30 line 35, col.31 line 63-col.32 line 26).

cc.   **Per claim 39,** *Manchester et al* teach the multi-link service card of claim 35, wherein the memory logic unit includes a memory device, a data memory control, and a data state logic (col.28 lines 1-46; *Stiles et al*: col.7 lines 7-27, col.11 line 10-col.12 line 64).

dd.   **Per claim 40,** *Manchester et al* teach the multi-link service card of claim 34, wherein the sequencer unit includes a reorder module (col.2 line 46-col.3 line 14, col.28 lines 17-55).

ee.   **Claim 43** is substantially similar to claim 35 and 39-41 and is therefore rejected under the same basis.

ff.   **Claim 52** is substantially similar to claims 24 and 6 and is therefore rejected under the same basis.

gg.   **Per claim 53,** *Manchester et al* teach the method of claim 1, wherein the interface card and the multi-link service card comprise removable cards that may be inserted and removed from the network device (col.6 lines 6-17; *Stiles et al:* col.4 line 21-col.5 line 52).

Conclusion

5.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Ho (2002/0136223), Lenoski et al (6735173), Finan et al (6718139), Santore et al (5615211).

6.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kristie Shingles whose telephone number is 571-272-3888. The examiner can normally be reached on Monday-Friday 8:30-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia can be reached on 571-272-3880. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

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system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Examiner
Art Unit 2141

kds

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